JVC

SCHEMATIC DIAGRAMS

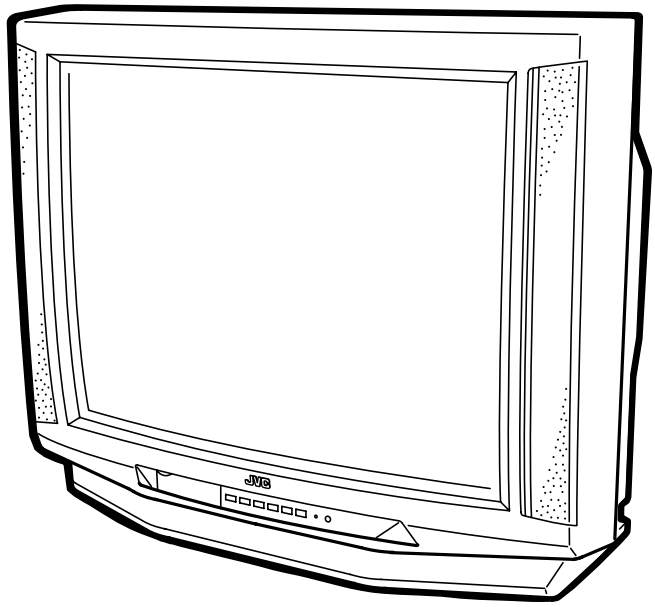
COLOR TELEVISION

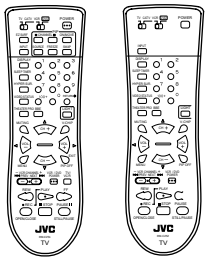
AV-36D503/M/R/Y
AV-36D303/M/R/Y
AV-36D203/M/R/Y

BASIC CHASSIS
GE

CD-ROM No.SML200205

BBE





RM-C251
[AV-36D503]

RM-C252
[AV-36D303]
[AV-36D203]

CONTENTS

No.51948
May 2002

AV-36D503/M/R/Y,AV-36D303/M/R/Y,AV-36D203/M/R/Y
STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal	: Colour bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	:DC 20kΩ/V
(4)Oscilloscope sweeping time	:H ⇒ 20μS/div
	:V ⇒ 5mS/div
	:Others ⇒ Sweeping time is specified
(5)Voltage values	:All DC voltage values

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board :R1209 → R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

No unit	:[Ω]
K	:[K Ω]
M	:[M Ω]

● Rated allowable power

No indication	:1/ 16 [W]
Others	:As specified

● Type

No indication	:Carbon resistor
OMR	:Oxide metal film resistor
MFR	:Metal film resistor
MPR	:Metal plate resistor
UNFR	:Uninflammable resistor
FR	:Fusible resistor

∗ Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

1 or higher	:[pF]
less than 1	:[μF]

● Withstand voltage

No indication	:DC50[V]
Others	:DC withstand voltage [V]
AC indicated	:AC withstand voltage [V]

∗ Electrolytic Capacitors
47/50[Example]:Capacitance value [μF]/withstand voltage[V]

● Type

No indication	:Ceramic capacitor
MM	:Metalized mylar capacitor
PP	:Polypropylene capacitor
MPP	:Metalized polypropylene capacitor
MF	:Metalized film capacitor
TF	:Thin film capacitor
BP	:Bipolar electrolytic capacitor
TAN	:Tantalum capacitor

(3)Coils

No unit	:[μH]
Others	:As specified

(4)Power Supply

:B1

:B2 (12V)

:9V

:5V

∗ Respective voltage values are indicated

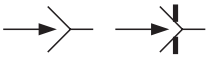
(5)Test point


:Test point

:Only test point display

(6)Connecting method


:Connector

:Wrapping or soldering

:Receptacle

(7)Ground symbol


:LIVE side ground

:ISOLATED(NEUTRAL) side ground

:EARTH ground

:DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND.Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

NOTE

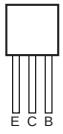
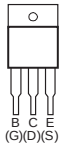
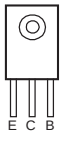
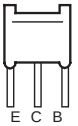
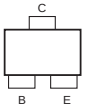
◇ **Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.**
When ordering parts, please use the numbers that appear in the Parts List.

May 2002 No. 51948

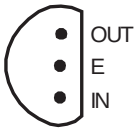
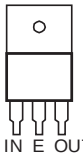
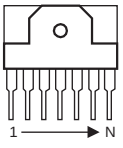
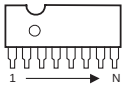
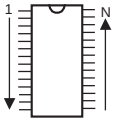
CONTENTS

SEMICONDUCTOR SHAPES

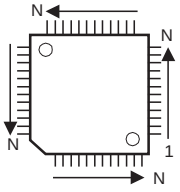
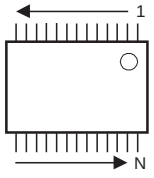
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

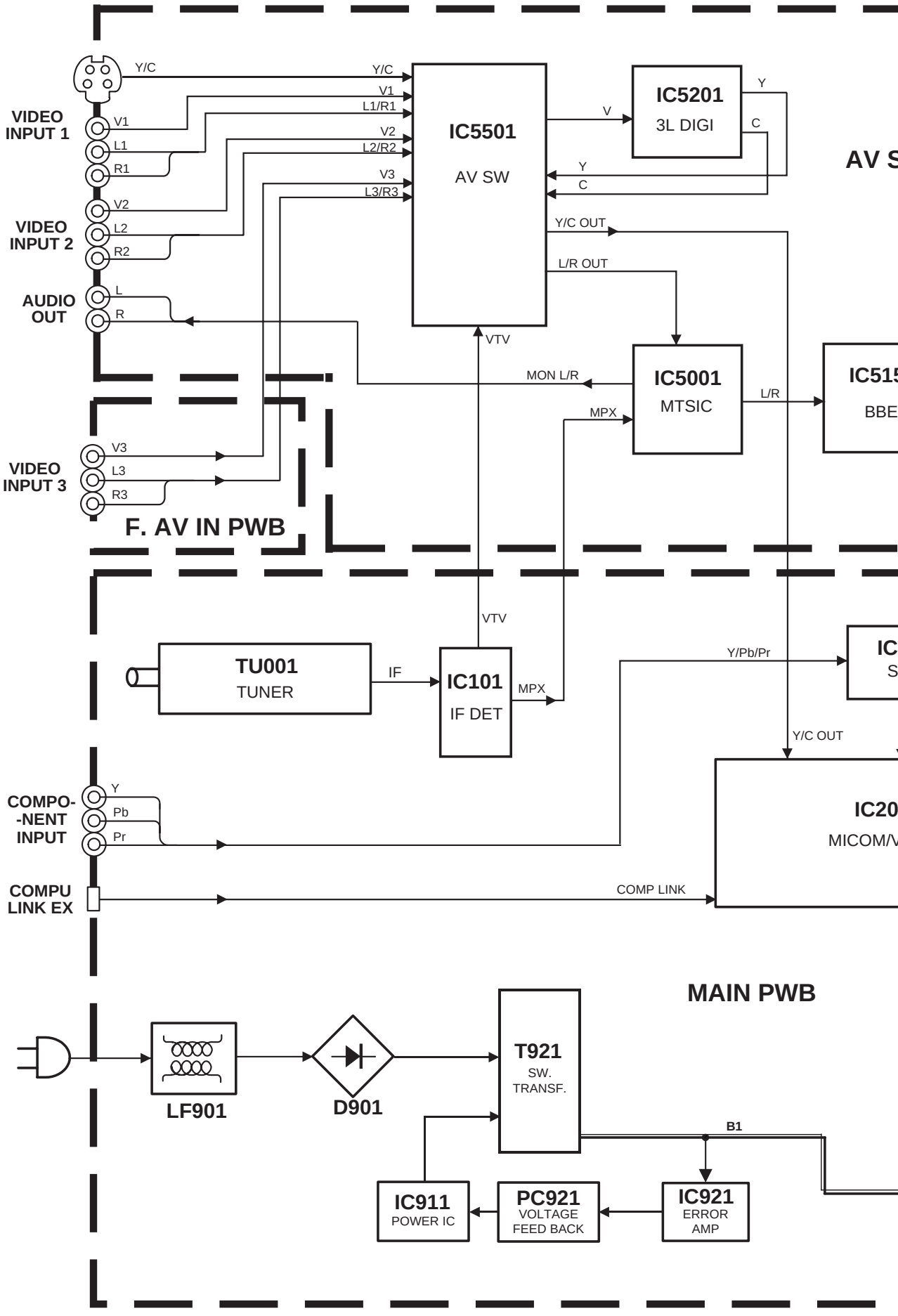
IC

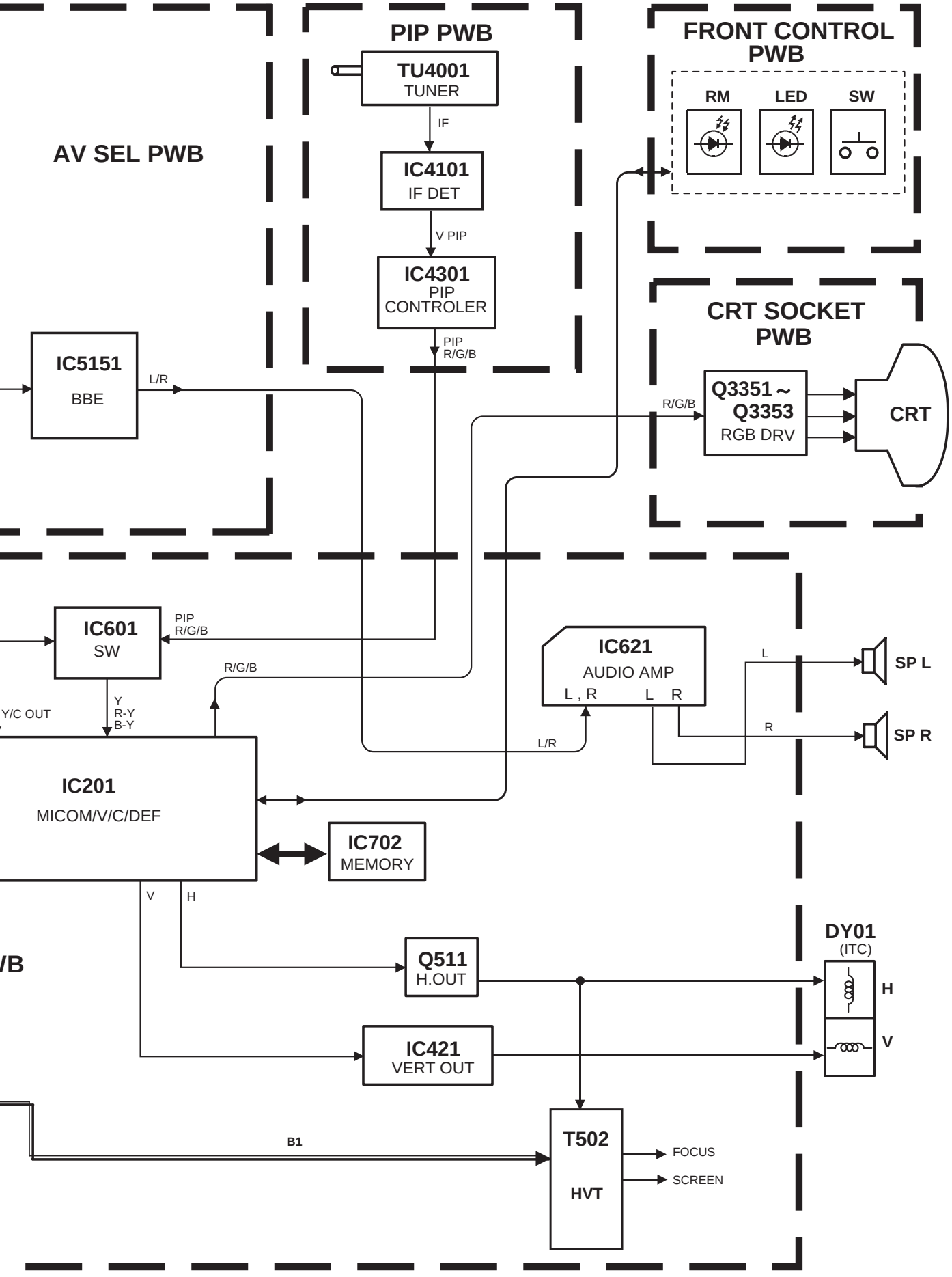
BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

CHIP IC

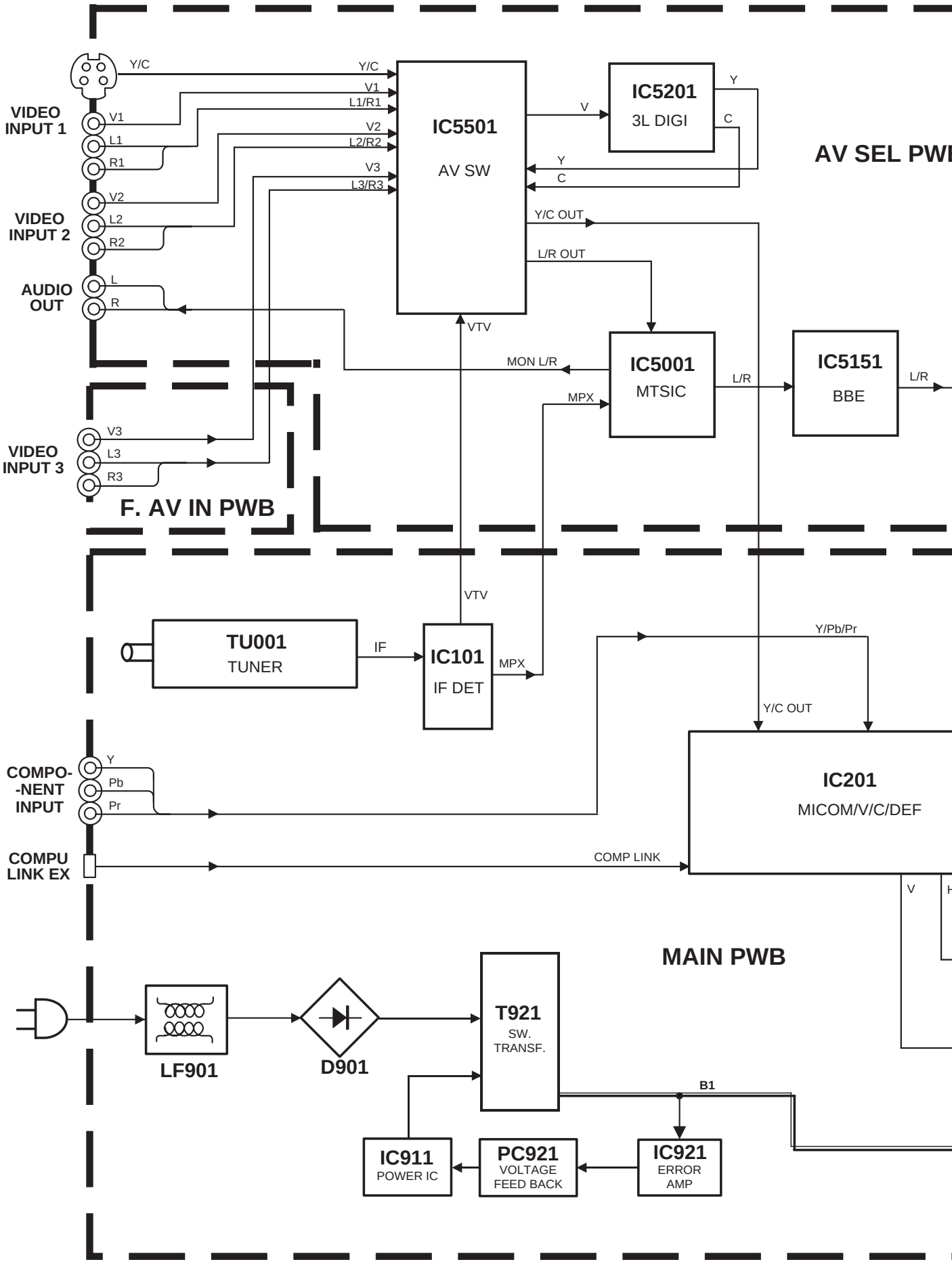
TOP VIEW		
		

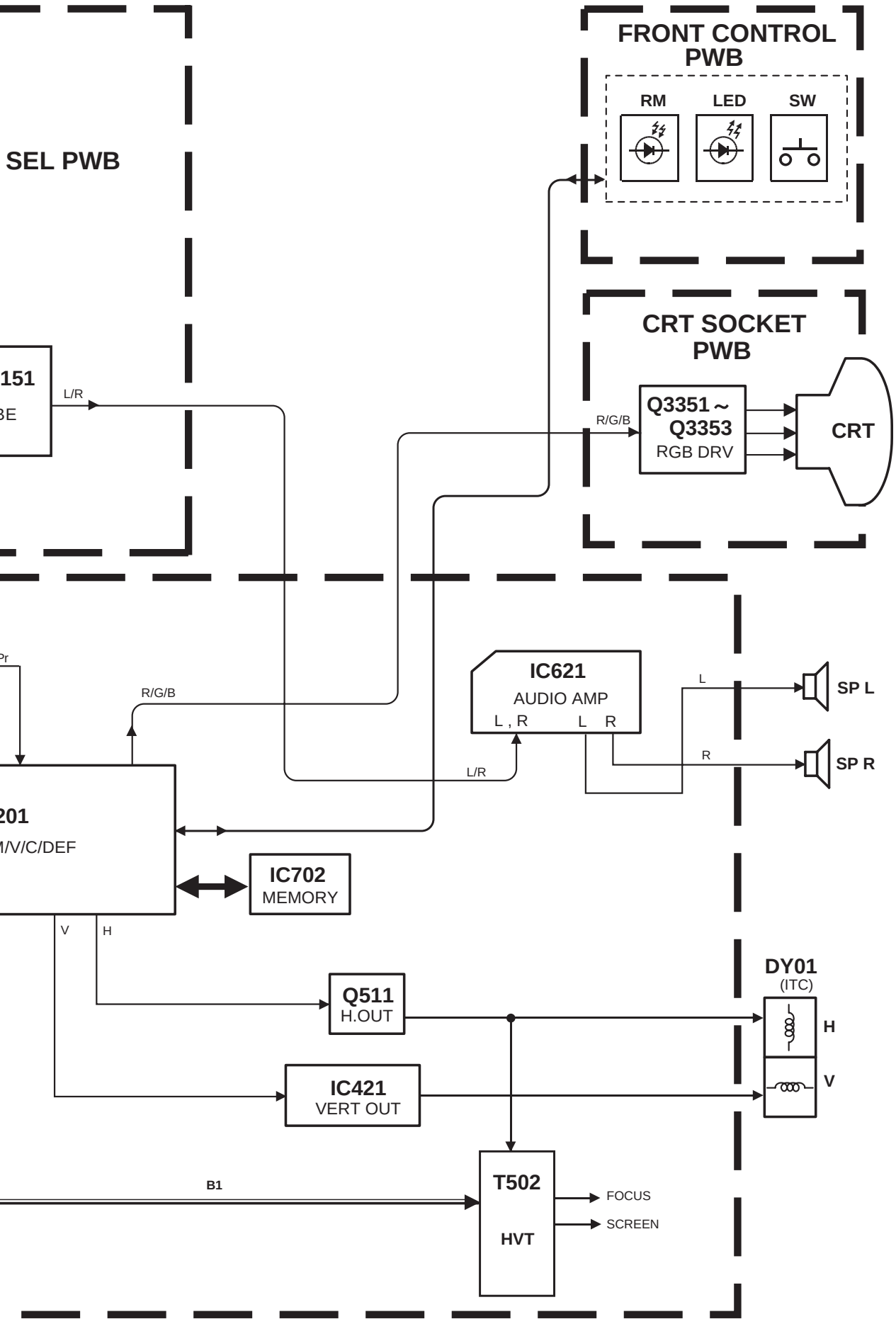
BLOCK DIAGRAM



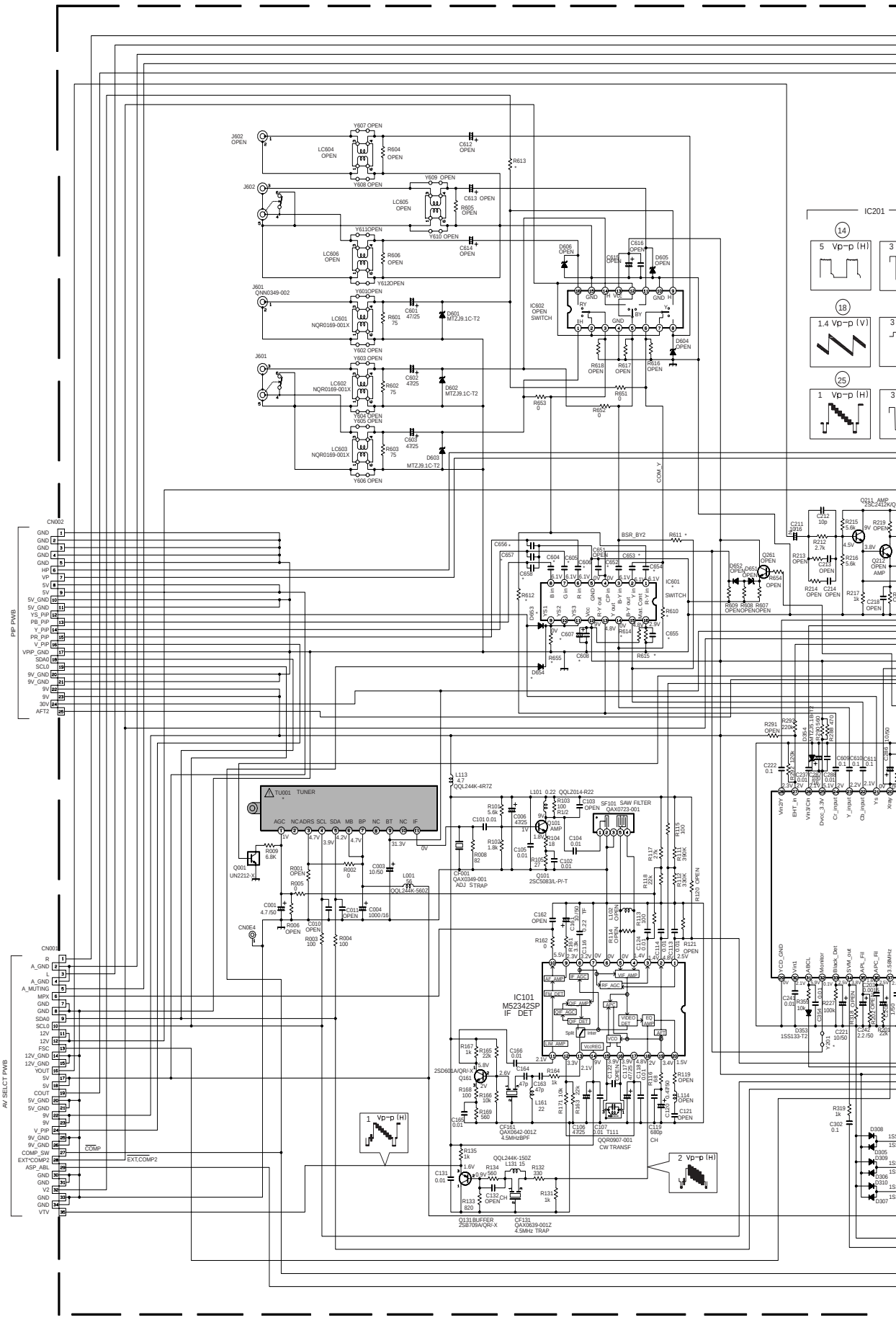

PIP PWB
TU4001
TUNER
IF
IC4101
IF DET
V PIP
IC4301
PIP
CONTROLER
PIP
R/G/B
AV SEL PWB
IC5151
BBE
L/R
FRONT CONTROL
PWB
RM
LED
SW
CRT SOCKET
PWB
Q3351 ~
Q3353
RGB DRV
R/G/B
CRT
IC601
SW
PIP
R/G/B
R/G/B
Y
R-Y
B-Y
Y/C OUT
IC621
AUDIO AMP
L , R
L R
L
R
SP L
SP R
L/R
IC201
MICOM/V/C/DEF
IC702
MEMORY
V
H
Q511
H.OUT
DY01
(ITC)
H
V
IC421
VERT OUT
B1
T502
HVT
FOCUS
SCREEN

BLOCK DIAGRAM



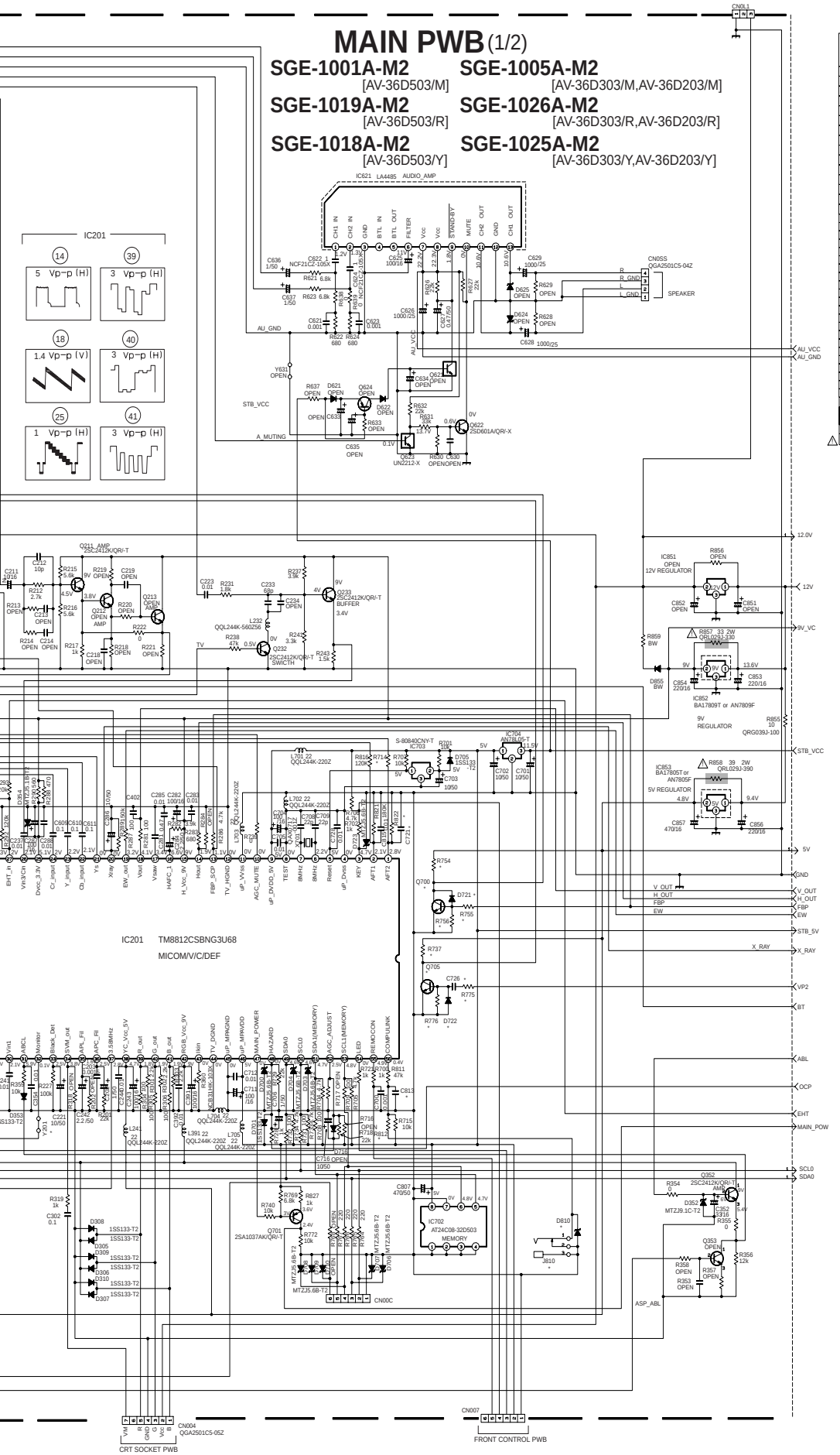

FRONT CONTROL PWB
RM
LED
SW
SEL PWB
151
BE
L/R
CRT SOCKET PWB
R/G/B
Q3351 ~ Q3353
RGB DRV
CRT
Pr
R/G/B
IC621
AUDIO AMP
L , R
L R
L
SP L
R
SP R
L/R
201
M/V/C/DEF
IC702
MEMORY
V
H
DY01
(ITC)
Q511
H.OUT
H
V
IC421
VERT OUT
B1
T502
HVT
FOCUS
SCREEN

CIRCUIT DIAGRAMS *MAIN PWB CIRCUIT DIAGRAMS* [1/2]



MAIN PWB (1/2)

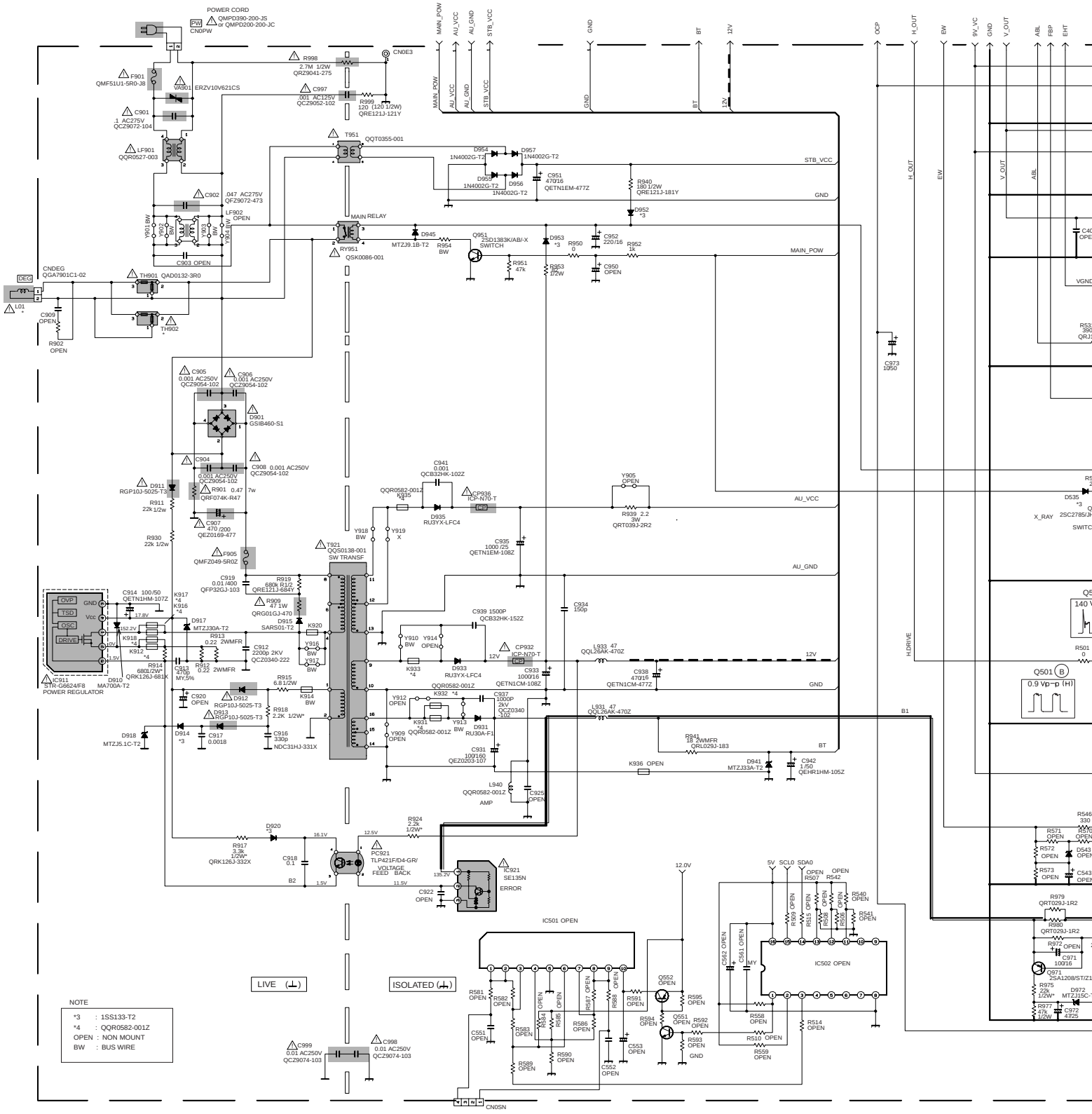
SGE-1001A-M2 [AV-36D503/M]
SGE-1005A-M2 [AV-36D303/M,AV-36D203/M]
SGE-1019A-M2 [AV-36D503/R]
SGE-1026A-M2 [AV-36D303/R,AV-36D203/R]
SGE-1018A-M2 [AV-36D503/Y]
SGE-1025A-M2 [AV-36D303/Y,AV-36D203/Y]



DIFFERENCE LIST

	SGE-1001A-M2 SGE-1019A-M2 SGE-1018A-M2	SGE-1005A-M2 SGE-1026A-M2 SGE-1025A-M2
Q700	2SD601A/QR/-X	OPEN
Q705	2SD601A/QR/-X	OPEN
D721	1SS133-T2	OPEN
D722	1SS133-T2	OPEN
R754	4.7k	OPEN
R755	15k	OPEN
R756	10k	OPEN
R737	4.7k	OPEN
R775	47k	OPEN
R776	10k	OPEN
C726	560p	OPEN
R714	82k	OPEN
R822	120k	0
C721	0.01	OPEN
Y201	0	OPEN
IC601	TA1287F-X	OPEN
D653	1SS133-T2	OPEN
D654	1SS133-T2	OPEN
R610	OPEN	0
R611	OPEN	0
R612	OPEN	OPEN
R614	6.8k	OPEN
R615	3.3k	OPEN
R655	15k	OPEN
C604	0.1	OPEN
C605	0.1	OPEN
C606	0.1	OPEN
C607	470/10	OPEN
C608	0.01	OPEN
C652	0.1	OPEN
C653	0.1	OPEN
C654	0.1	OPEN
C655	0.01	OPEN
C656	15p	OPEN
C657	15p	OPEN
C658	15p	OPEN
R613	OPEN	0
J810	QNS0001-001	OPEN
D810	MTZJ5.6B-T2	OPEN
R812	1k	OPEN
C813	0.001	OPEN
⚠ TU001	QAU0272-001	QAU0274-001

MAIN PWB CIRCUIT DIAGRAM [2/2]



DIFFERENCE LIST

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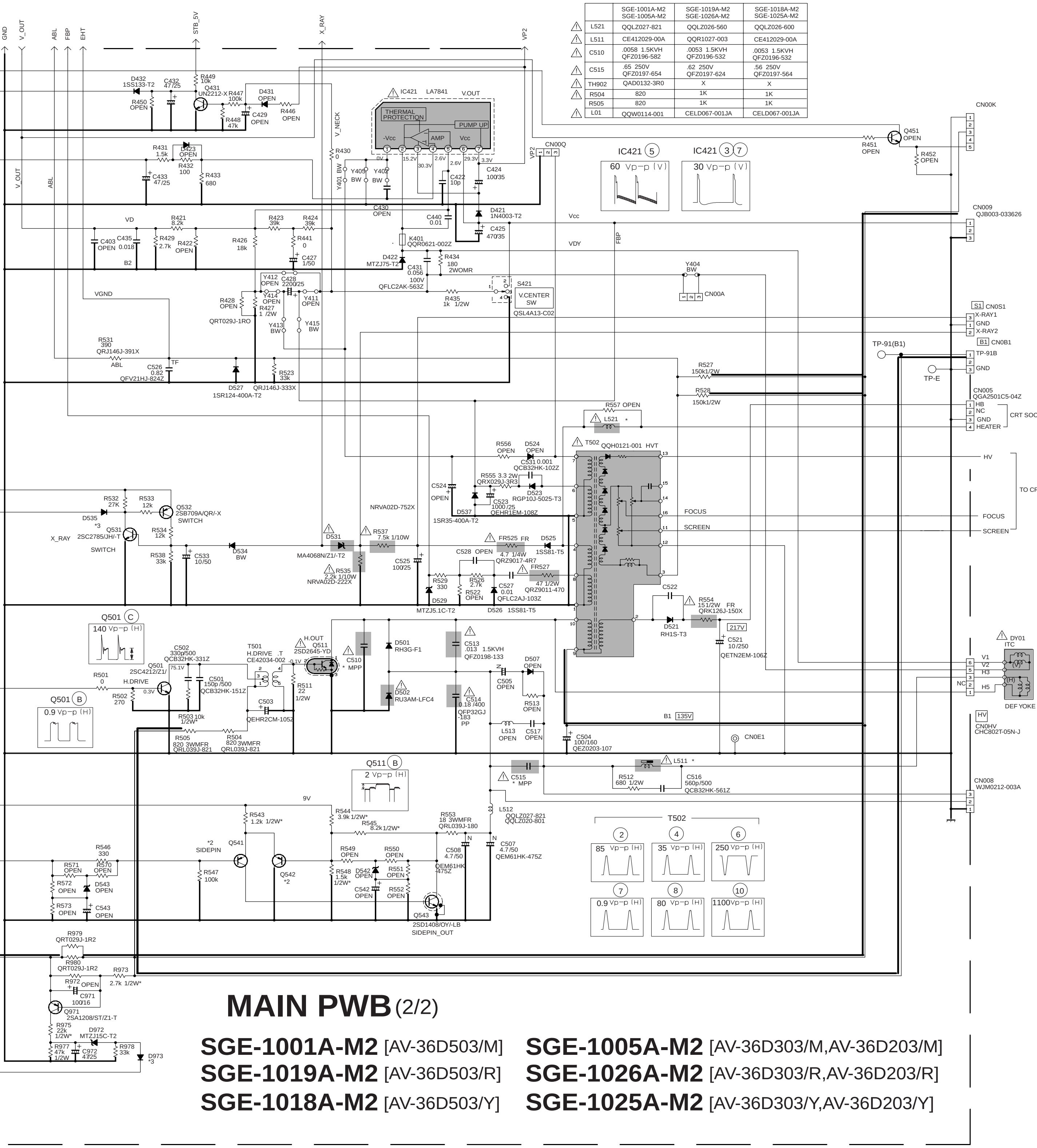
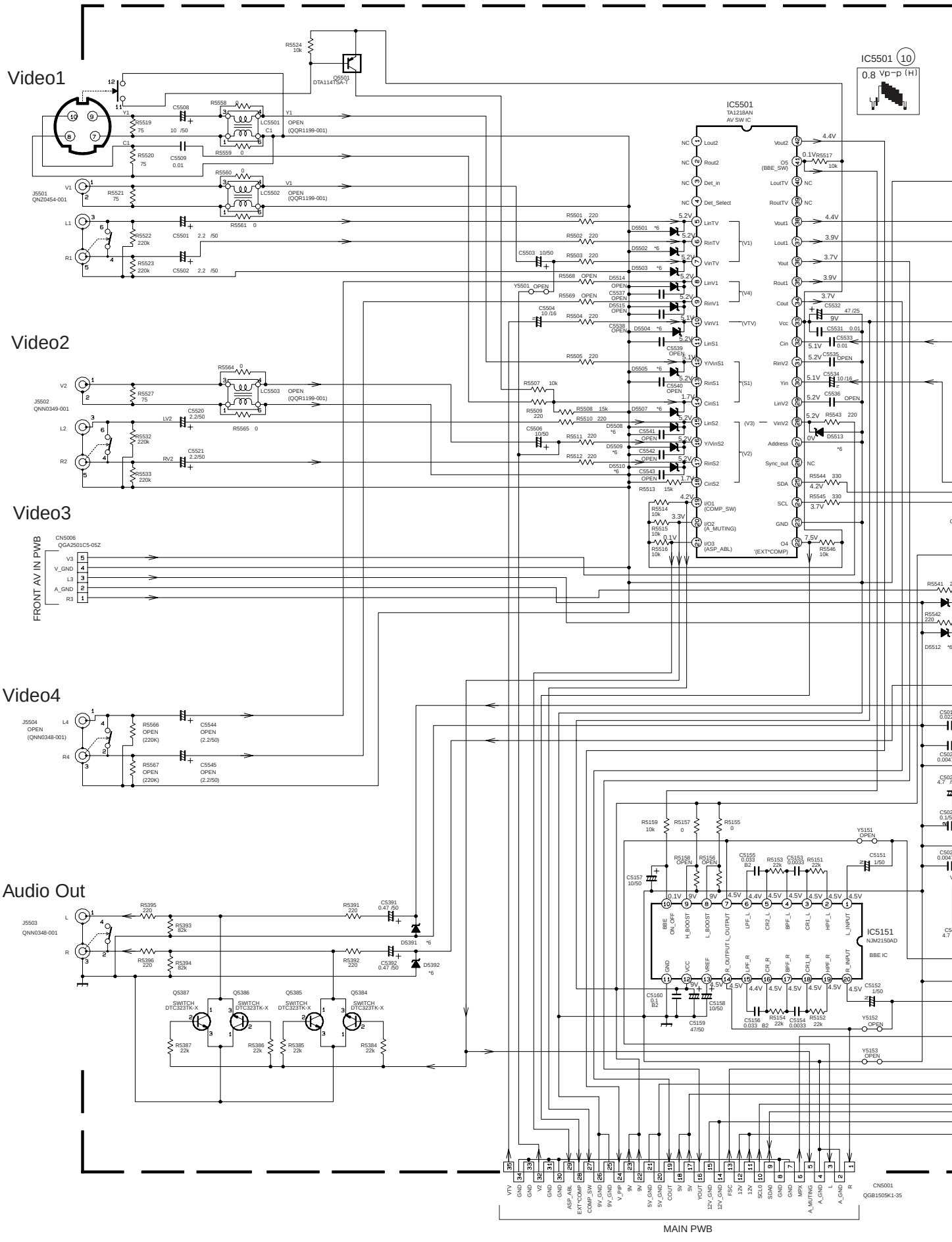
⚠	L521	QQLZ027-821	QQLZ026-560	QQLZ026-600
⚠	L511	CE412029-00A	QQR1027-003	CE412029-00A
⚠	C510	.0058 1.5KVH QFZ0196-582	.0053 1.5KVH QFZ0196-532	.0053 1.5KVH QFZ0196-532
⚠	C515	.65 250V QFZ0197-654	.62 250V QFZ0197-624	.56 250V QFZ0197-564
⚠	TH902	QAD0132-3R0	X	X
⚠	R504	820	1K	1K
	R505	820	1K	1K
⚠	L01	QQW0114-001	CELD067-001JA	CELD067-001JA

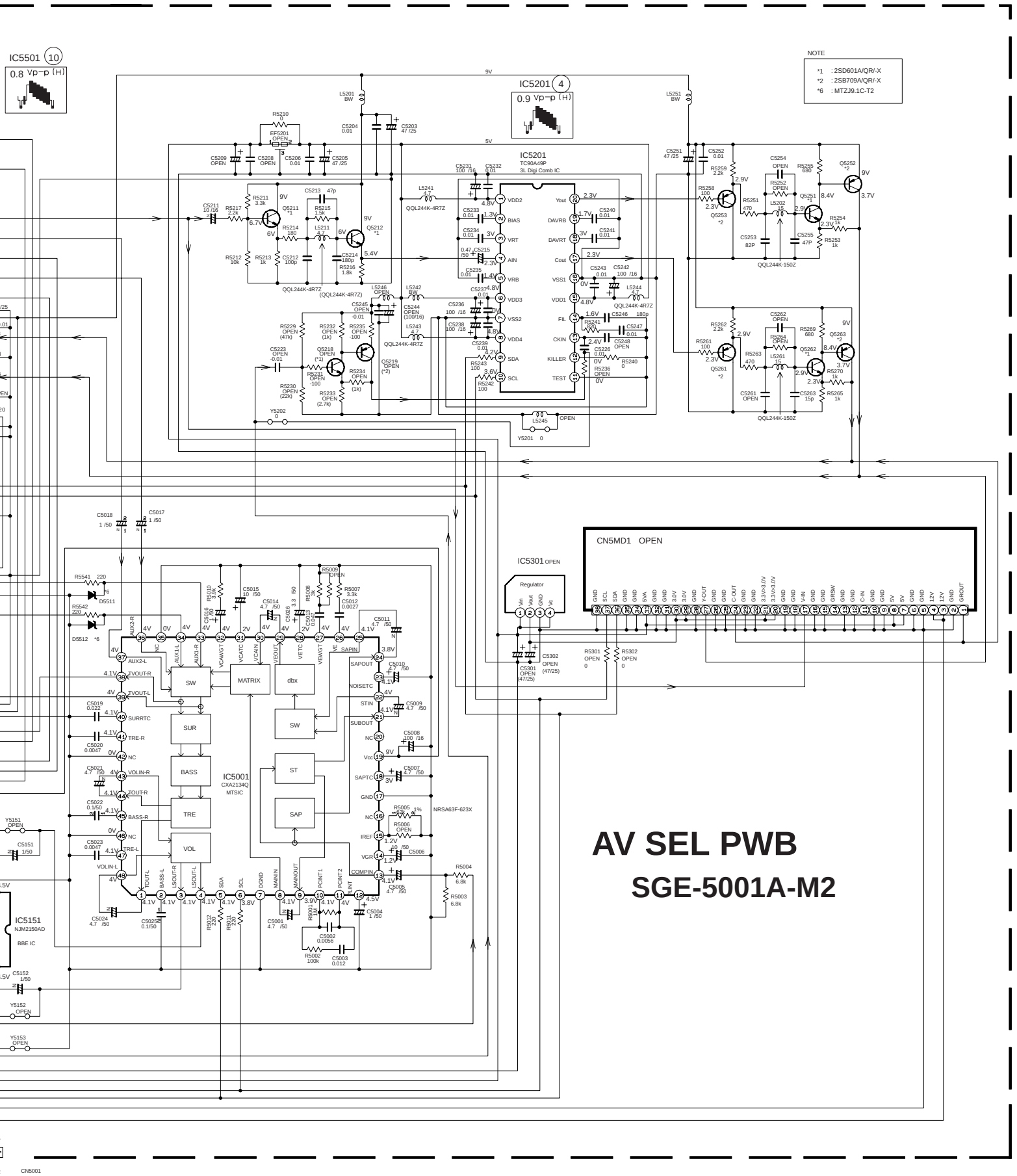


MAIN PWB (2/2)

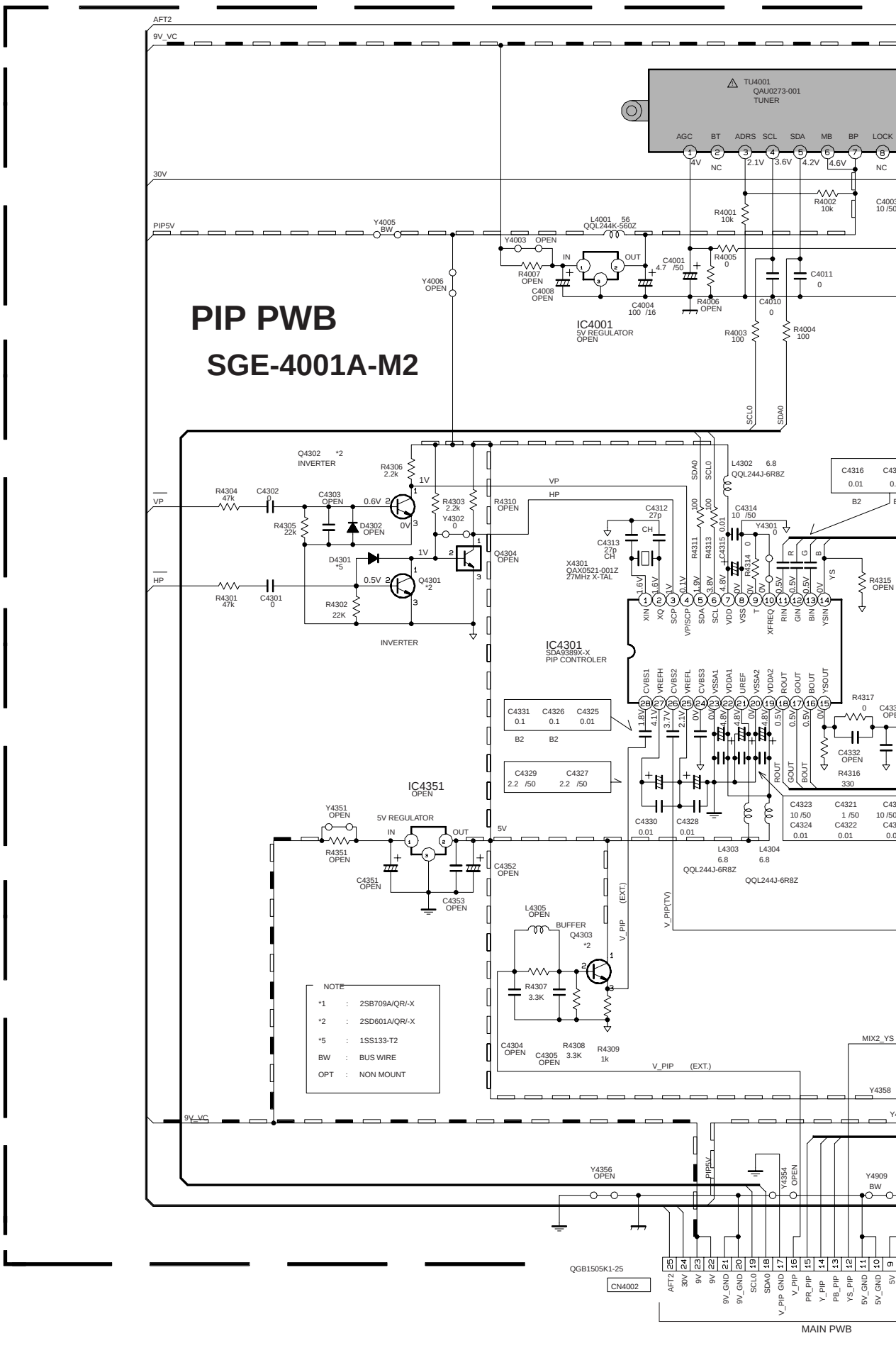
SGE-1001A-M2 [AV-36D503/M] **SGE-1005A-M2** [AV-36D303/M,AV-36D203/M]
SGE-1019A-M2 [AV-36D503/R] **SGE-1026A-M2** [AV-36D303/R,AV-36D203/R]
SGE-1018A-M2 [AV-36D503/Y] **SGE-1025A-M2** [AV-36D303/Y,AV-36D203/Y]

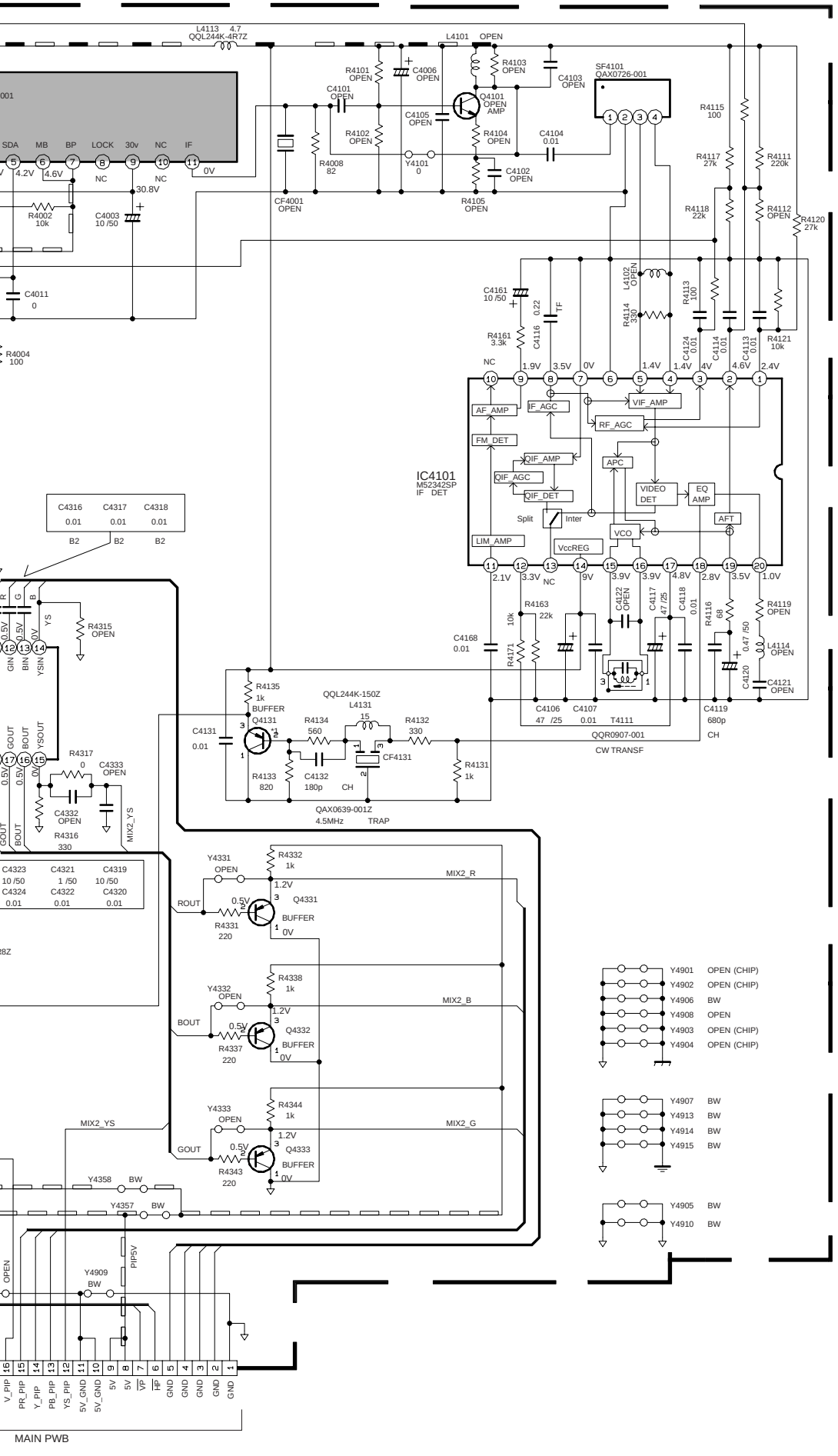
AV SEL PWB CIRCUIT DIAGRAM



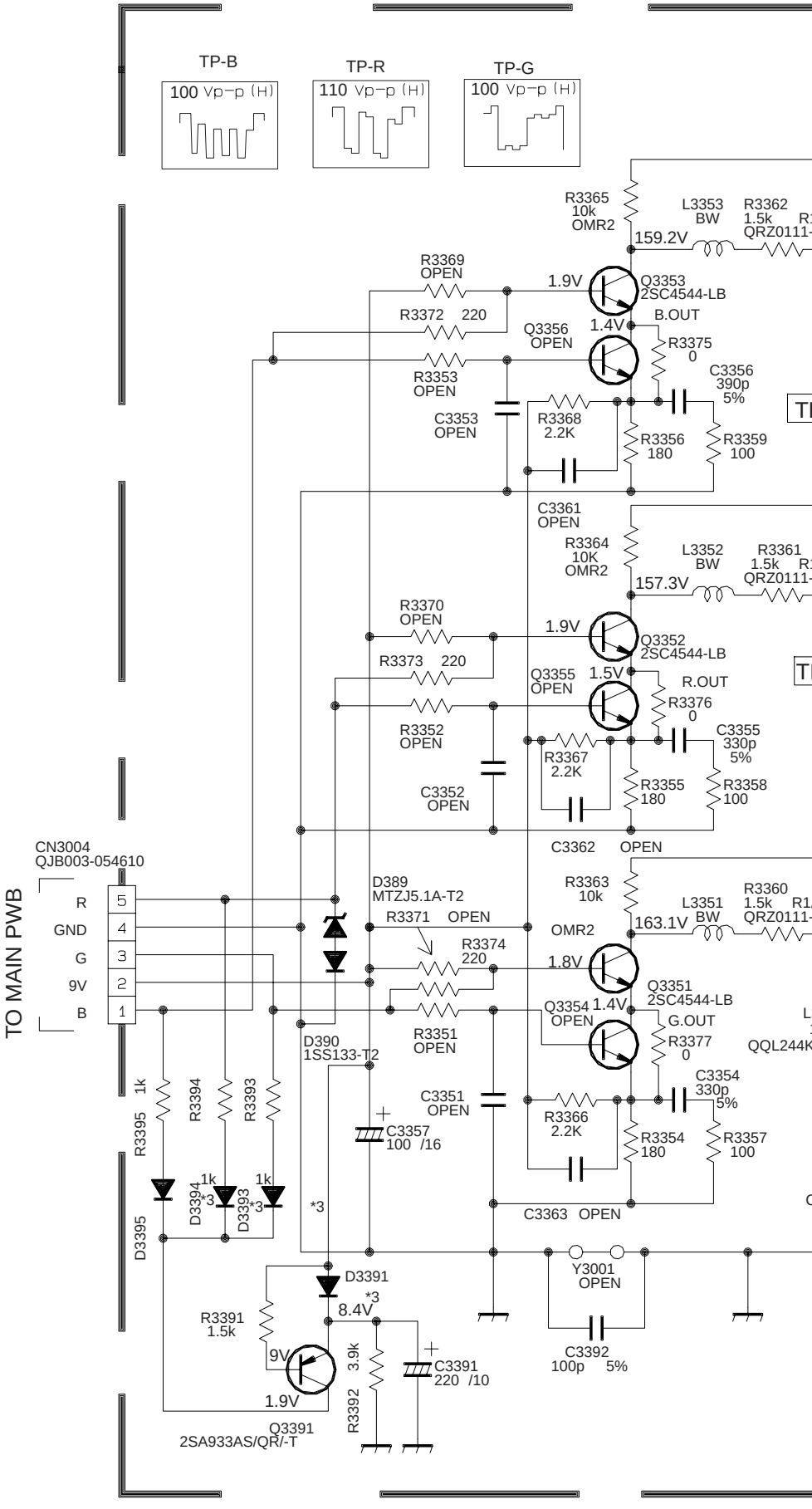

AV SEL PWB
SGE-5001A-M2
IC5001
CXA2134Q
MTSIC
IC5201
TC90A49P
3L Digi Comb IC
IC5301 OPEN
Regulator
IC5151
NJM2150AD
BBE IC
CN5MD1 OPEN
NOTE
*1 : 2SD601A/QR/-X
*2 : 2SB709A/QR/-X
*6 : MTZJ9.1C-T2
NRSA63F-623X
QQL244K-4R7Z
QQL244K-150Z
CN5001
QGB1505K1-35

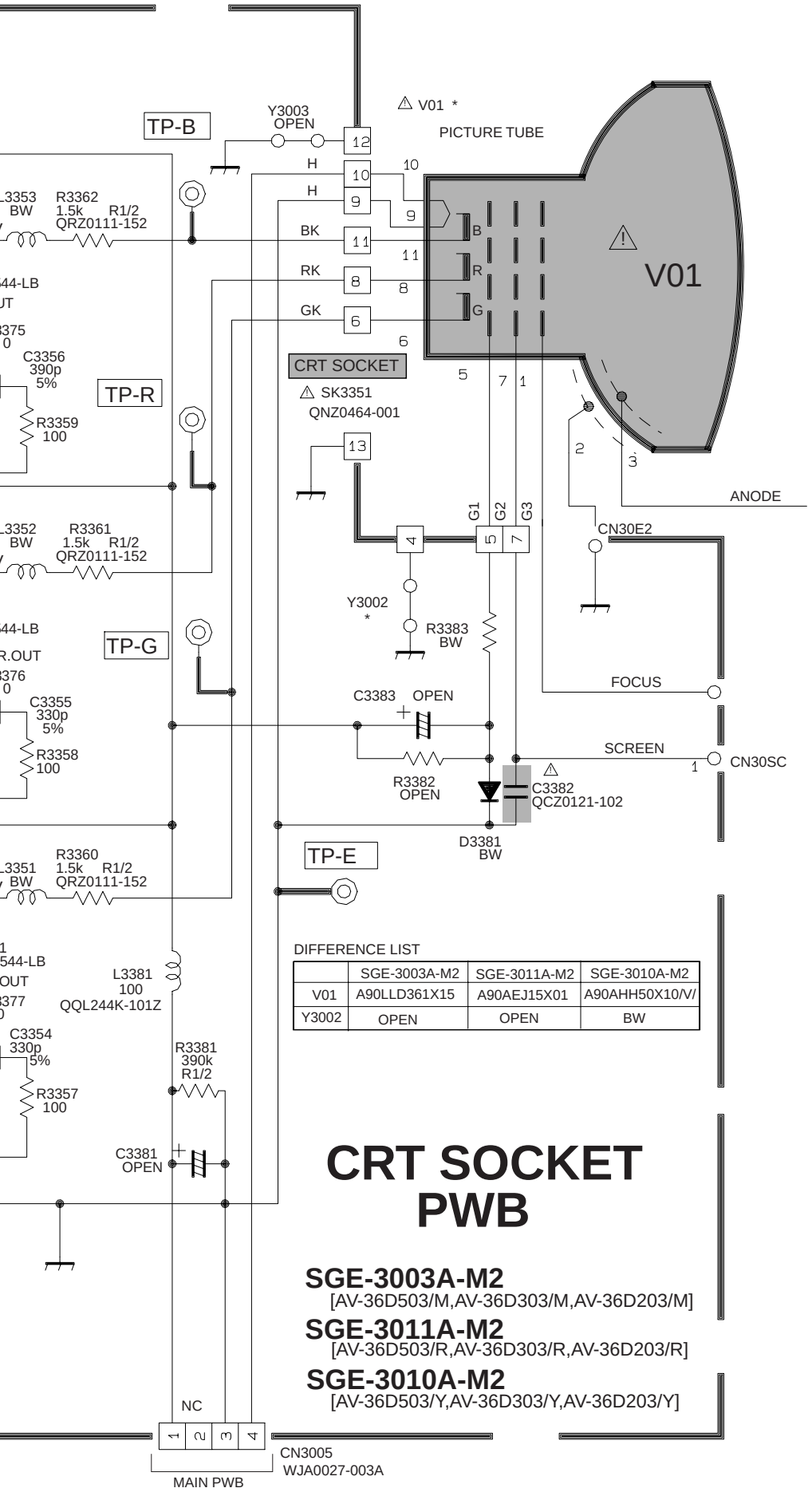
PIP PWB CIRCUIT DIAGRAM




IC4101
M52342SP
IF DET
AF_AMP
IF_AGC
VIF_AMP
RF_AGC
FM_DET
QIF_AMP
QIF_AGC
QIF_DET
APC
VIDEO DET
EQ AMP
Split
Inter
AFT
VCO
LIM_AMP
VccREG
SF4101
QAX0726-001
Q4101
OPEN
AMP
Y4101
0
CF4001
OPEN
R4008
82
R4002
10k
C4003
10 /50
C4011
0
R4004
100
L4113 4.7
QQL244K-4R7Z
L4101 OPEN
R4101 OPEN
C4006 OPEN
R4103 OPEN
C4103 OPEN
C4101 OPEN
C4105 OPEN
R4102 OPEN
R4104 OPEN
C4104 0.01
C4102 OPEN
R4105 OPEN
R4115 100
R4117 27k
R4111 220k
R4118 22k
R4112 OPEN
R4120 27k
C4161 10 /50
R4161 3.3k
C4116 0.22
ITF
L4102 OPEN
R4114 330
R4113 100
C4124 0.01
C4114 0.01
C4113 0.01
R4121 10k
C4316 C4317 C4318
0.01 0.01 0.01
B2 B2 B2
R4315 OPEN
R4135 1k
BUFFER
Q4131
QQL244K-150Z
L4131
R4134 560
R4132 330
C4131 0.01
R4133 820
C4132 180p CH
CF4131
R4131 1k
QAX0639-001Z
4.5MHz TRAP
C4168 0.01
R4163 22k
R4171 10k
C4122 OPEN
C4417 47 /25
C4418 0.01
R4116 68
R4119 OPEN
L4114 OPEN
C4120 0.47 /50
C4121 OPEN
C4106 47 /25
C4107 0.01
T4111
QQR0907-001
CW TRANSF
C4119 680p CH
R4317 0
C4333 OPEN
C4332 OPEN
R4316 330
MIX2_YS
C4323 C4321 C4319
10 /50 1 /50 10 /50
C4324 C4322 C4320
0.01 0.01 0.01
Y4331 OPEN
R4332 1k
MIX2_R
ROUT
Q4331
BUFFER
R4331 220
Y4332 OPEN
R4338 1k
MIX2_B
BOUT
Q4332
R4337 220
Y4333 OPEN
R4344 1k
MIX2_G
GOUT
Q4333
R4343 220
Y4358 BW
Y4357 BW
Y4909 BW
PIP5V
Y4901 OPEN (CHIP)
Y4902 OPEN (CHIP)
Y4906 BW
Y4908 OPEN
Y4903 OPEN (CHIP)
Y4904 OPEN (CHIP)
Y4907 BW
Y4913 BW
Y4914 BW
Y4915 BW
Y4905 BW
Y4910 BW
V_PIP
PR_PIP
Y_PIP
PB_PIP
YS_PIP
5V_GND
5V_GND
5V
5V
VP
HP
GND
GND
GND
GND
MAIN PWB

CRT SOCKET PWB CIRCUIT DIAGRAM





DIFFERENCE LIST

	SGE-3003A-M2	SGE-3011A-M2	SGE-3010A-M2
V01	A90LLD361X15	A90AEJ15X01	A90AHH50X10/V/
Y3002	OPEN	OPEN	BW

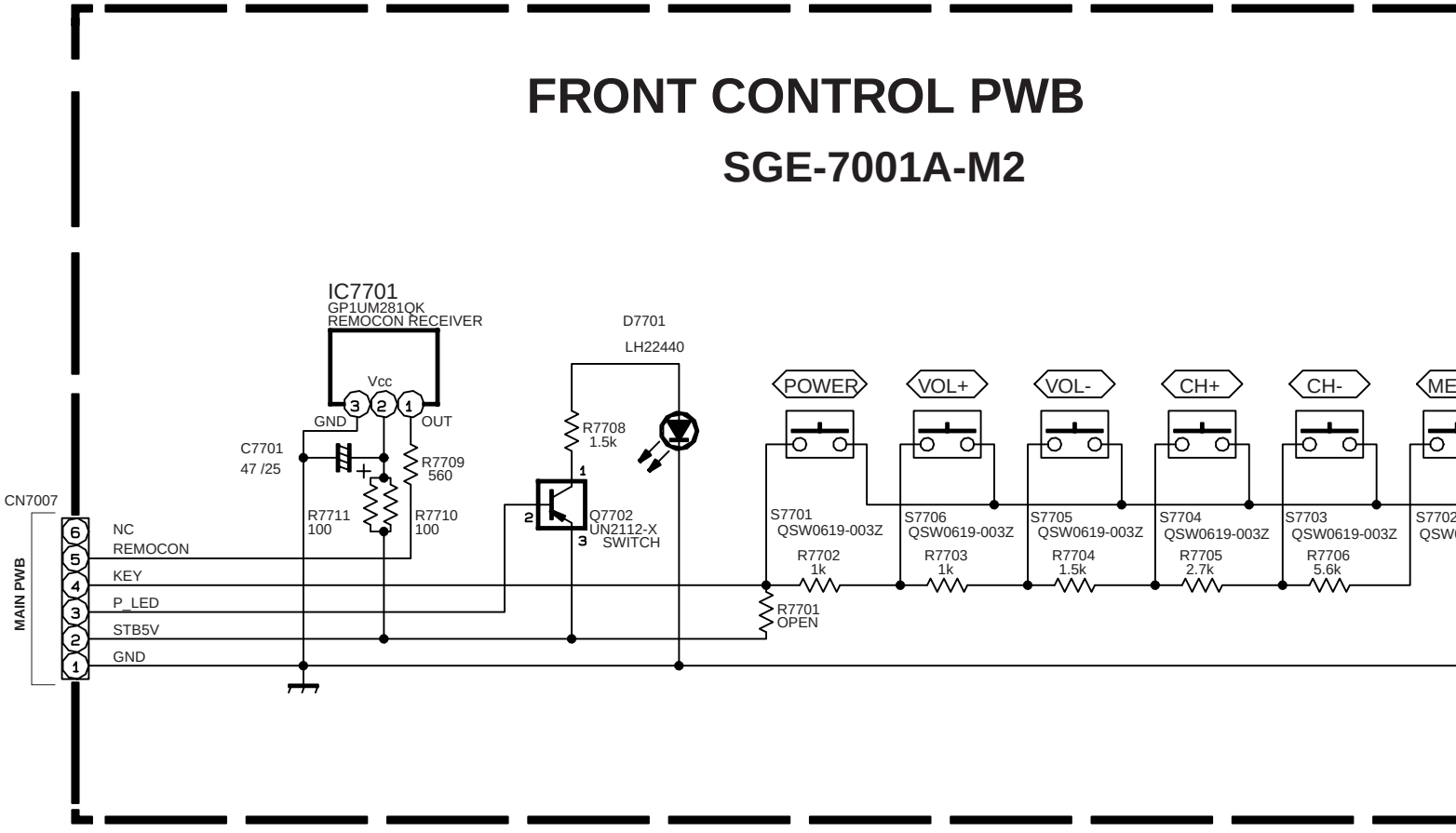
CRT SOCKET PWB

SGE-3003A-M2
[AV-36D503/M,AV-36D303/M,AV-36D203/M]

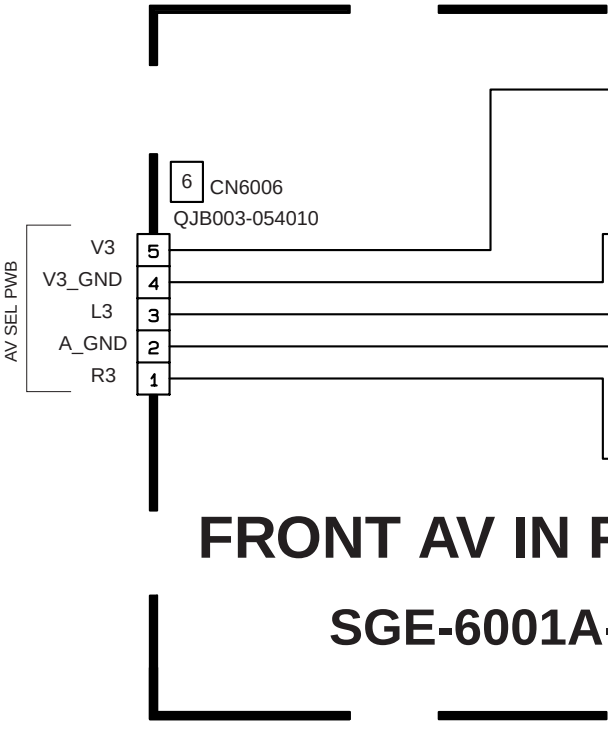
SGE-3011A-M2
[AV-36D503/R,AV-36D303/R,AV-36D203/R]

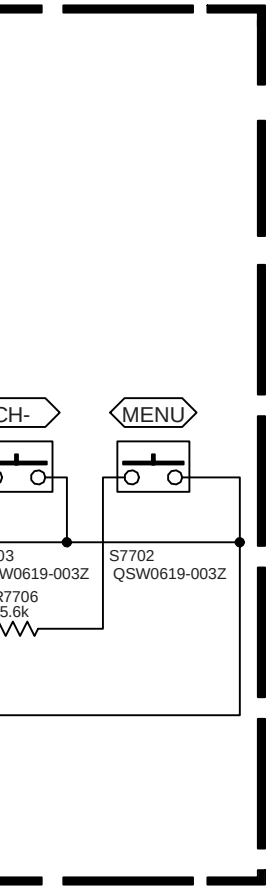
SGE-3010A-M2
[AV-36D503/Y,AV-36D303/Y,AV-36D203/Y]

FRONT CONTROL PWB CIRCUIT DIAGRAM

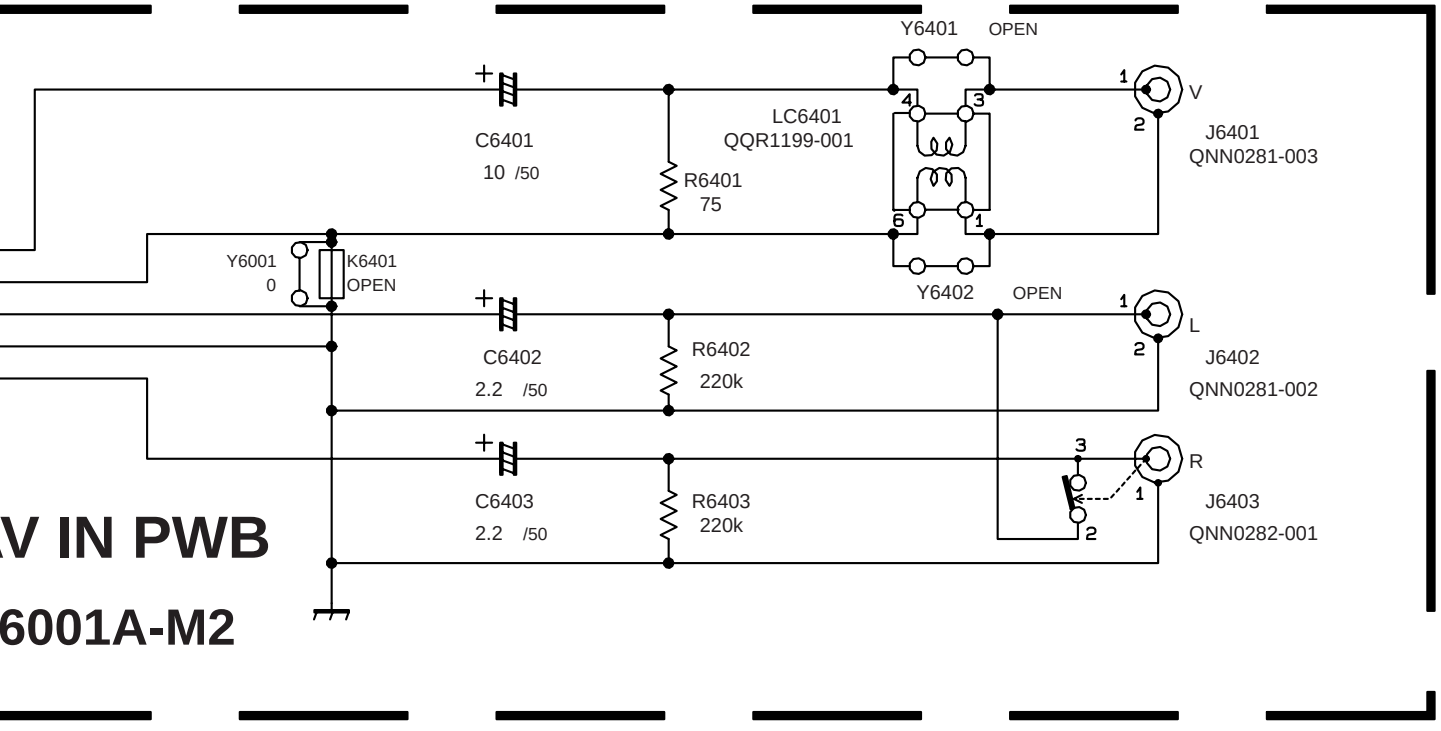


FRONT AV IN PWB CIRCUIT DIAGRAM



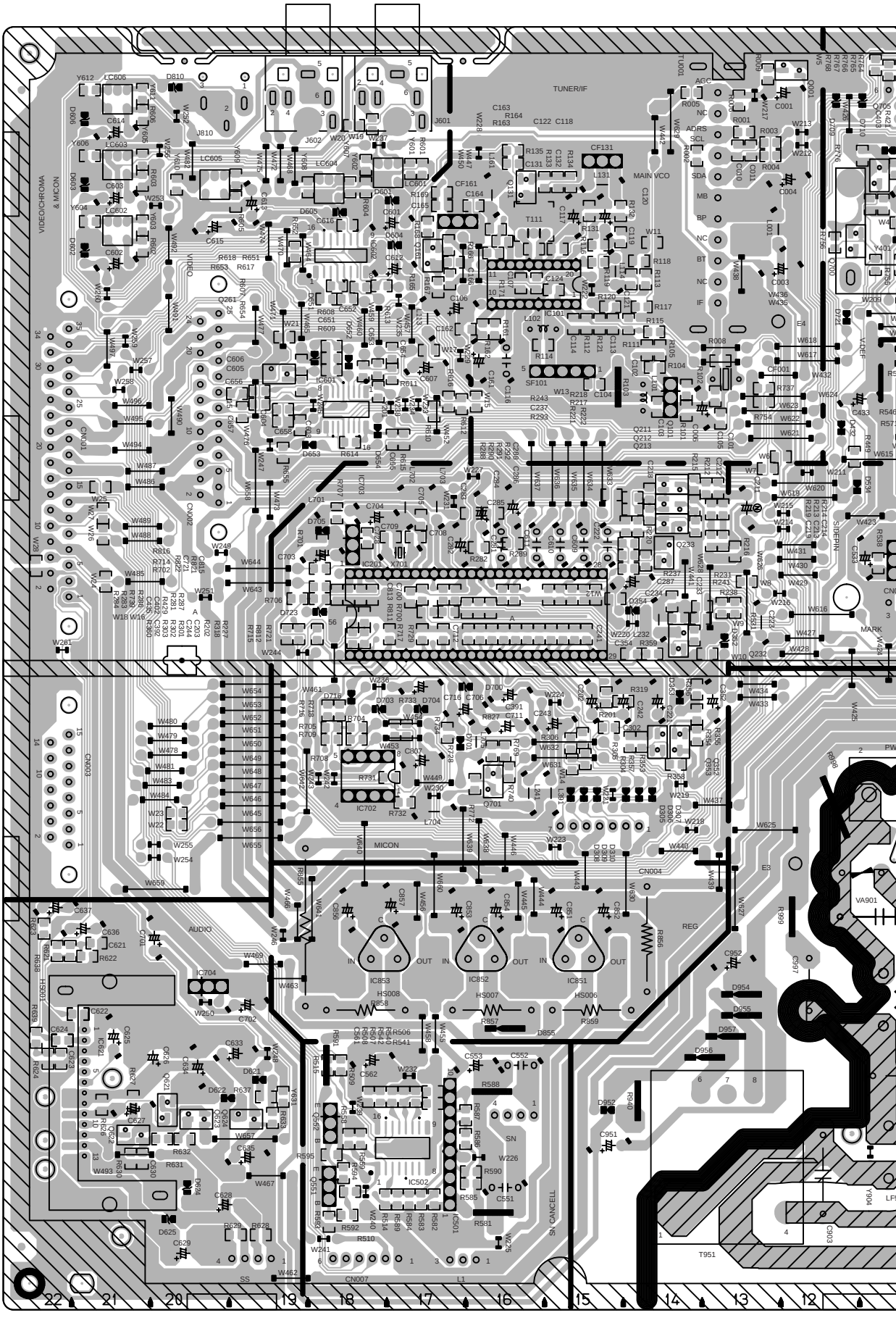

CH-
MENU
03
W0619-003Z
R7706
5.6k
S7702
QSW0619-003Z

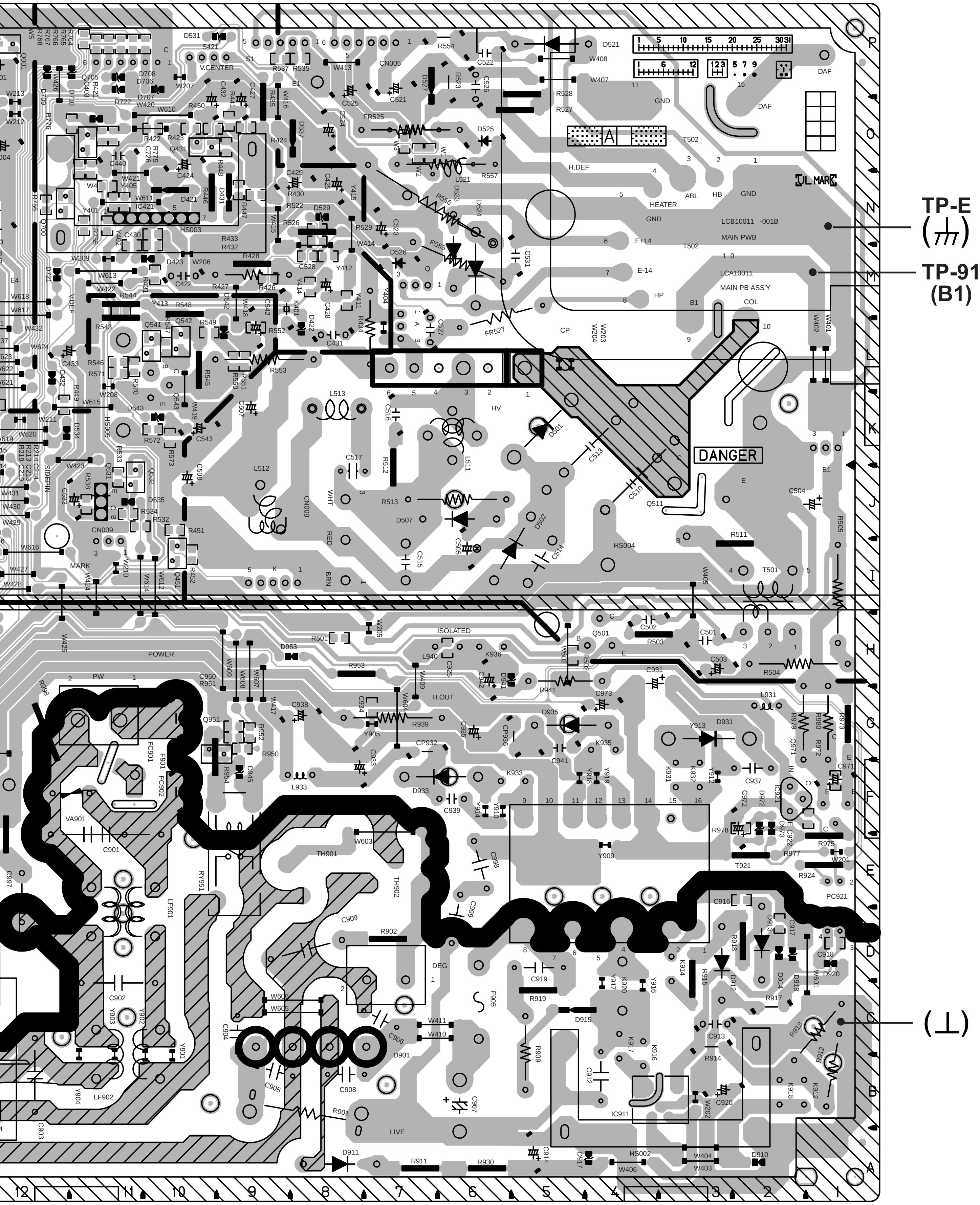
UIT DIAGRAM


Y6401 OPEN
C6401
10 /50
LC6401
QQR1199-001
R6401
75
V
J6401
QNN0281-003
Y6001
0
K6401
OPEN
Y6402 OPEN
C6402
2.2 /50
R6402
220k
L
J6402
QNN0281-002
C6403
2.2 /50
R6403
220k
R
J6403
QNN0282-001
V IN PWB
6001A-M2

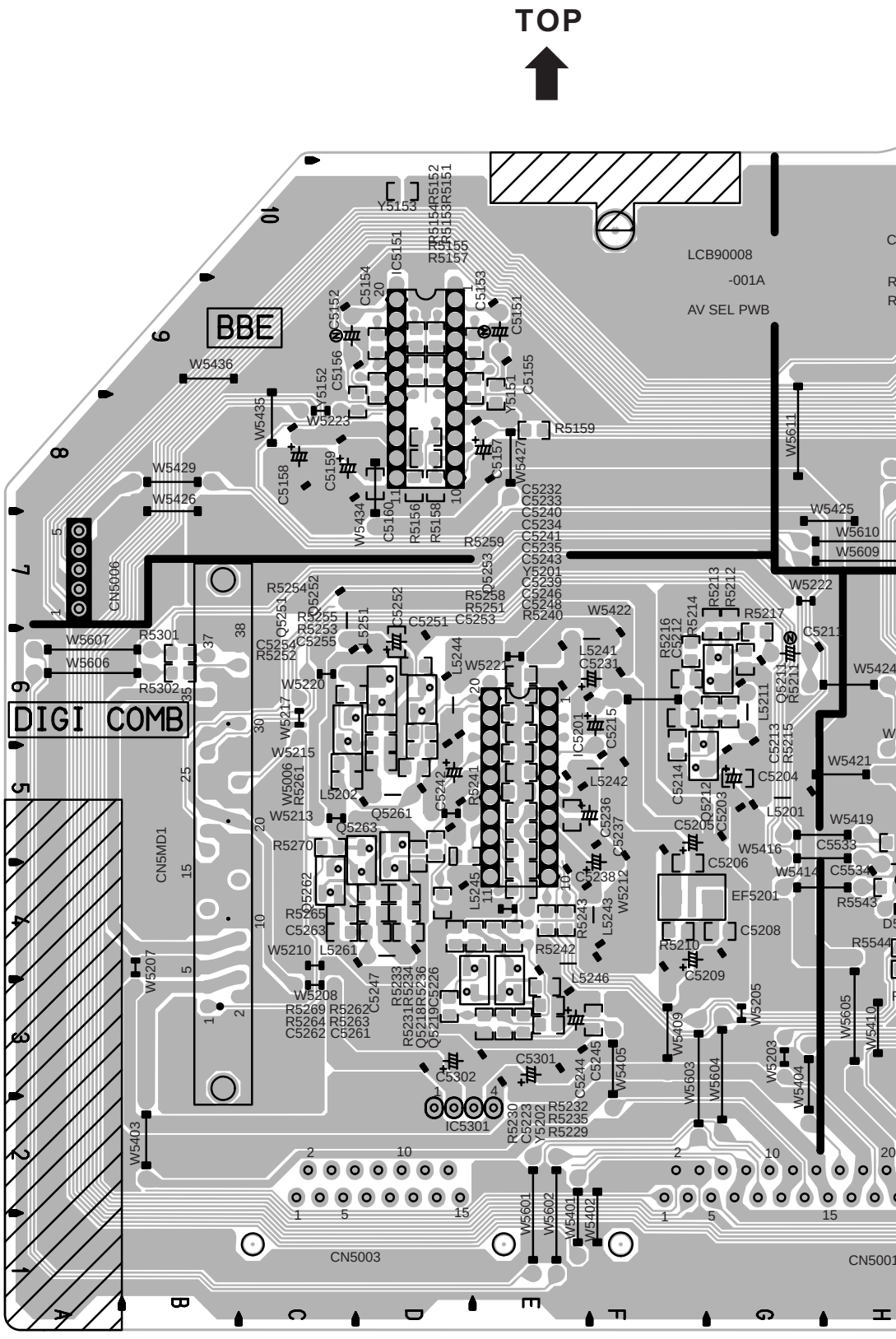
PATTERN DIAGRAMS *MAIN PWB PATTERN*

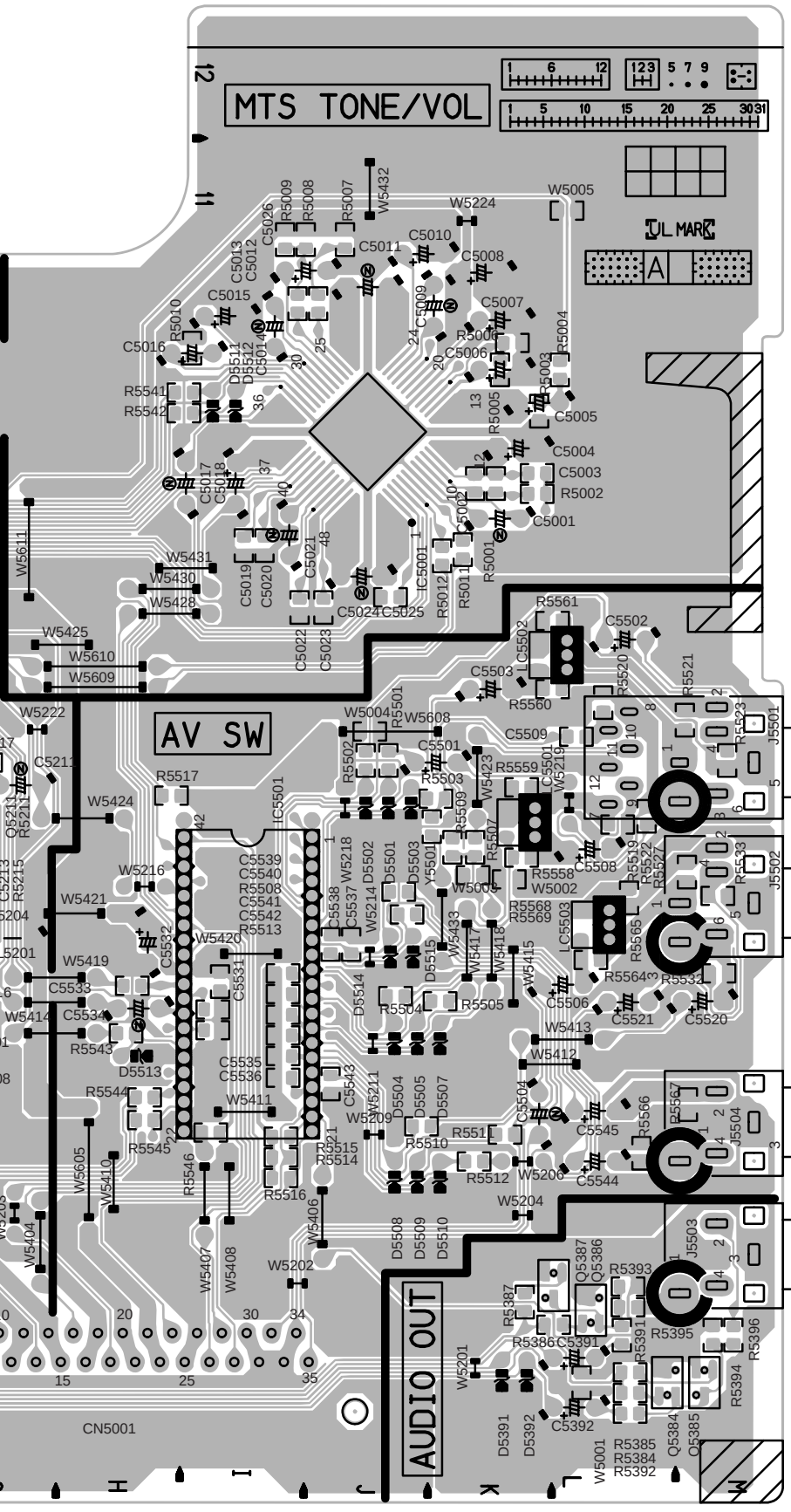
FRONT



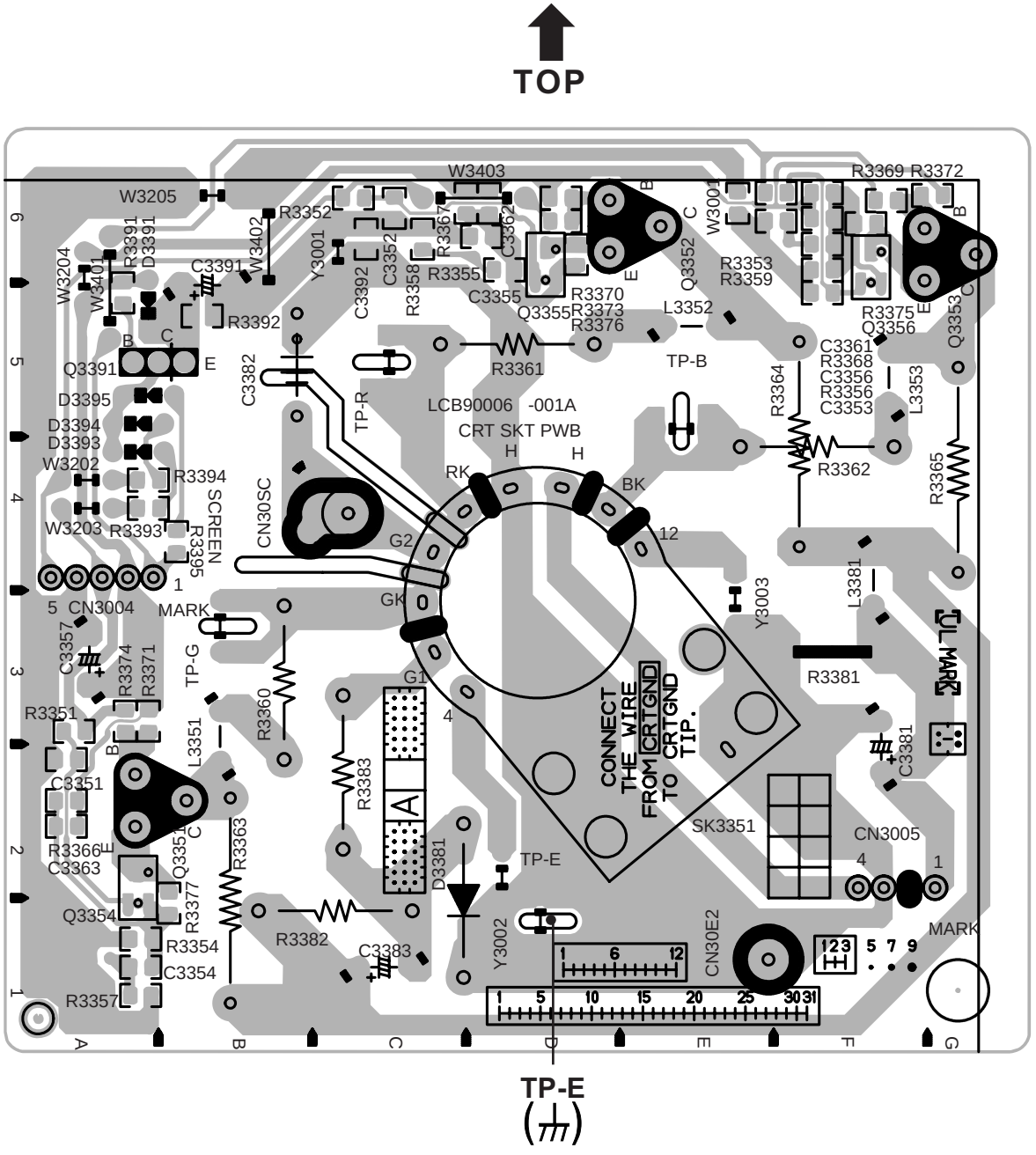

TP-E
TP-91
(B1)
(⊥)
DANGER
POWER
ISOLATED
LIVE
H.OUT
HV
H.DEF
LCB10011 -001B
MAIN PWB
LCA10011
MAIN PB ASS'Y
V.CENTER
DAF

AV SEL PWB PATTERN

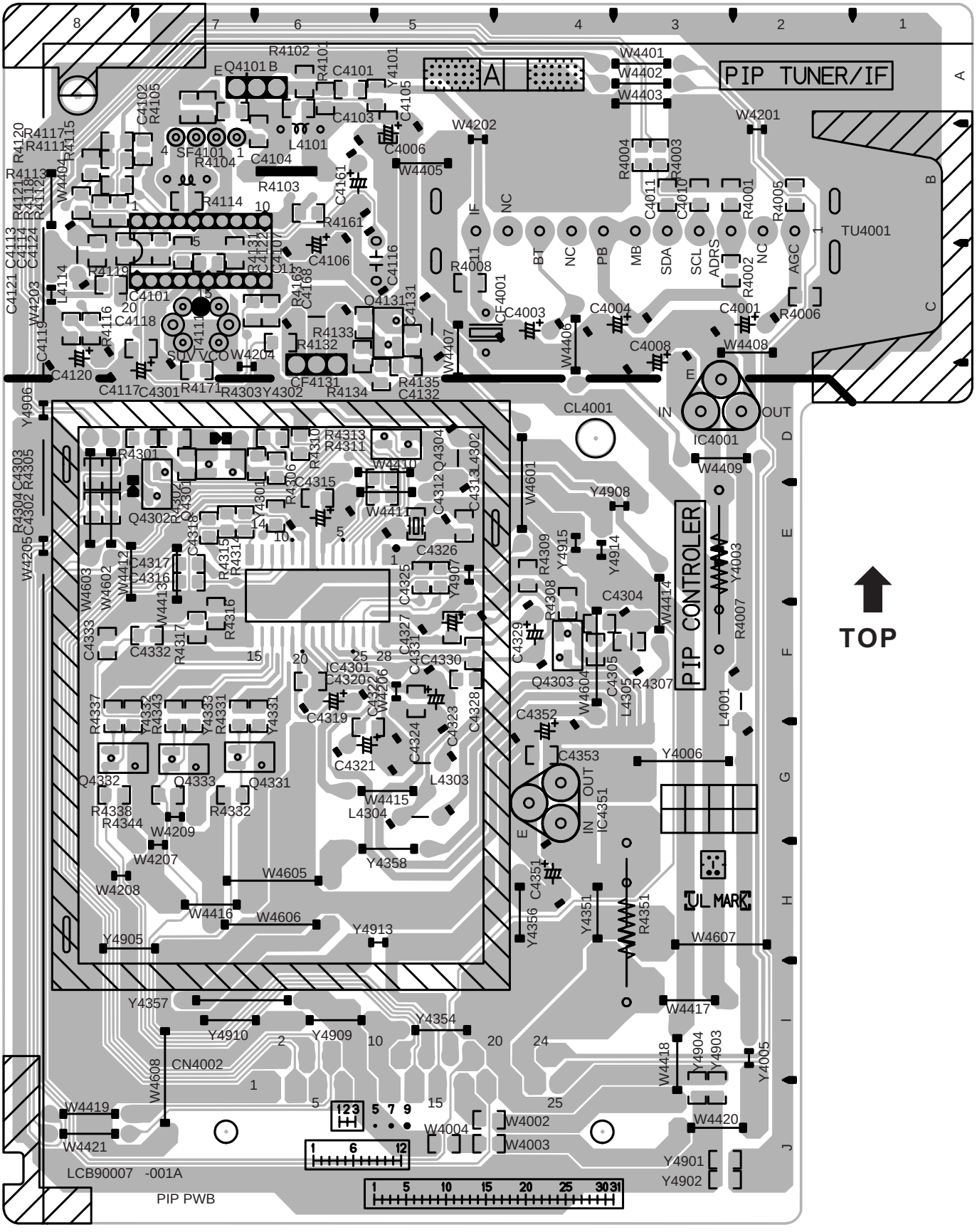



MTS TONE/VOL
AV SW
AUDIO OUT
UL MARK
CN5001
J5501
J5502
J5504
J5503

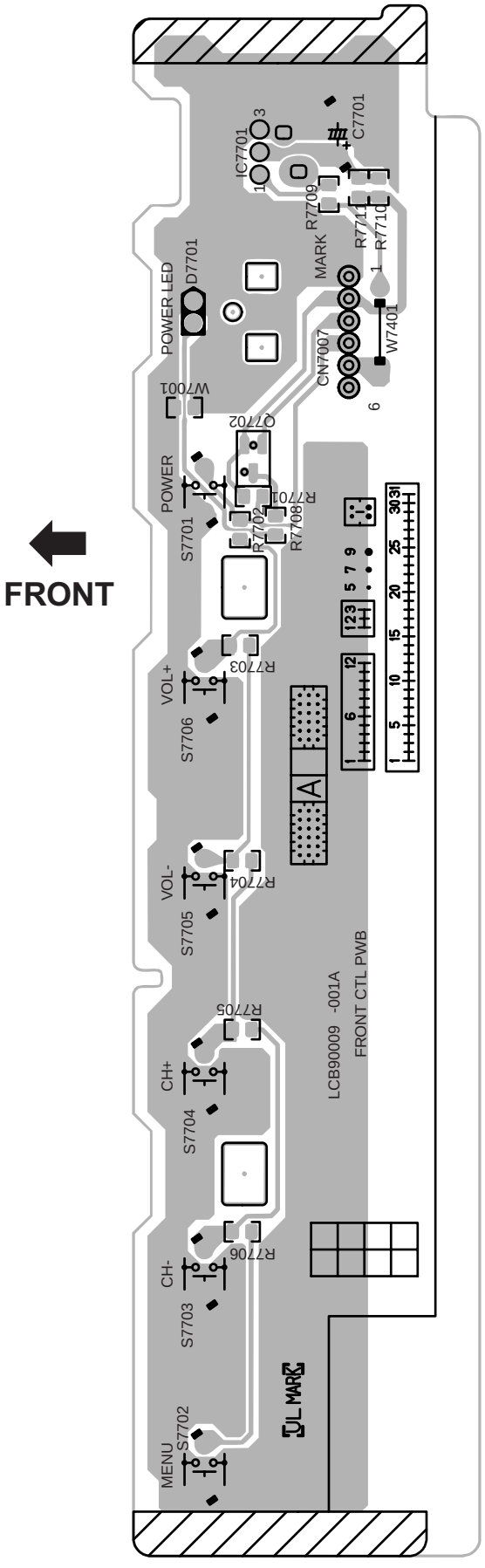
CRT SOCKET PWB PATTERN



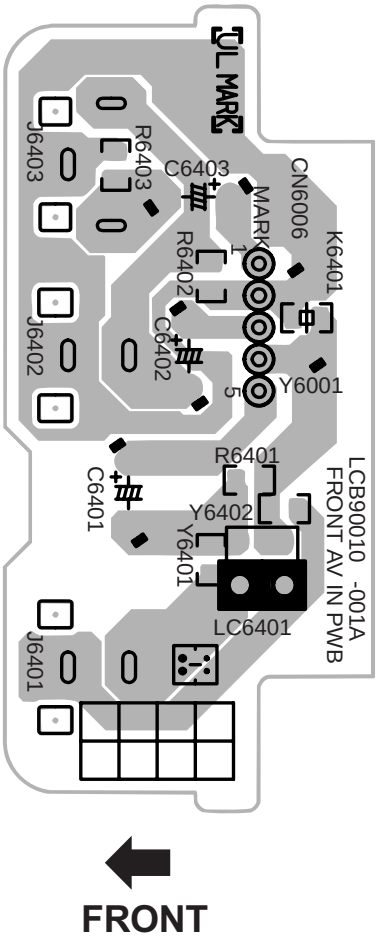
PIP PWB PATTERN



FRONT CONTROL PWB PATTERN



FRONT AV IN PWB PATTERN



CHANNEL CHART (US)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		Ⅰ
			03		
			04		
			05		
			06		
		VH	07		Ⅱ
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	Ⅰ
			B	15	
			C	16	Ⅱ
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W+1	37	
			W+2	38	
			W+3	39	
			W+4	40	
			W+5	41	
			W+6	42	
			W+7	43	
			W+8	44	
			W+9	45	
			W+10	46	
			W+11	47	
			W+12	48	Ⅳ
			W+13	49	
			W+14	50	
			W+15	51	
			W+16	52	
			W+17	53	
			W+18	54	
			W+19	55	
			W+20	56	
			W+21	57	
			W+22	58	
			W+23	59	
			W+24	60	
			W+25	61	
			W+26	62	
			W+27	63	
			W+28	64	
		ULTRA	W+29	65	
			W+30	66	
			W+31	67	
			W+32	68	
			W+33	69	
			W+34	70	

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W+35	71	Ⅳ
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
			W+53	89	
			W+54	90	
			W+55	91	
			W+56	92	
			W+57	93	
			W+58	94	
			W+59	100	
			W+60	101	
			W+61	102	
			W+62	103	
			W+63	104	
			W+64	105	
			W+65	106	
			W+66	107	
			W+67	108	
			W+68	109	
			W+69	110	
			W+70	111	
			W+71	112	
			W+72	113	
			W+73	114	
			W+74	115	
			W+75	116	
			W+76	117	
			W+77	118	
			W+78	119	
			W+79	120	
			W+80	121	
			W+81	122	
			W+82	123	
			W+83	124	
			W+84	125	
		SUB MID	A-8	01	Ⅰ
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14 ∫ 69		Ⅳ

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES.
SPECIAL ADAPTERS MAY BE REQUIRED.

CHANNEL CHART (CA)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		Ⅰ
			03		
			04		
			05		
			06		
		VH	07		Ⅱ
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	
			B	15	
			C	16	
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	Ⅲ
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W+1	37	
			W+2	38	
			W+3	39	
			W+4	40	
			W+5	41	
			W+6	42	
			W+7	43	
			W+8	44	
			W+9	45	
			W+10	46	
			W+11	47	
			W+12	48	
			W+13	49	
			W+14	50	
			W+15	51	
			W+16	52	
			W+17	53	
			W+18	54	
			W+19	55	
			W+20	56	
			W+21	57	
			W+22	58	
			W+23	59	
			W+24	60	
			W+25	61	
			W+26	62	
			W+27	63	
			W+28	64	
		ULTRA	W+29	65	
			W+30	66	Ⅳ
			W+31	67	
			W+32	68	
			W+33	69	
			W+34	70	

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W+35	71	Ⅳ
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
			W+53	89	
			W+54	90	
			W+55	91	
			W+56	92	
			W+57	93	
			W+58	94	
			W+59	100	
			W+60	101	
			W+61	102	
			W+62	103	
			W+63	104	
			W+64	105	
			W+65	106	
			W+66	107	
			W+67	108	
			W+68	109	
			W+69	110	
			W+70	111	
			W+71	112	
			W+72	113	
			W+73	114	
			W+74	115	
			W+75	116	
			W+76	117	
			W+77	118	
			W+78	119	
			W+79	120	
			W+80	121	
			W+81	122	
			W+82	123	
			W+83	124	
			W+84	125	
		SUB MID	A-8	01	Ⅰ
			A-4	96	
			A-3	97	Ⅱ
			A-2	98	
			A-1	99	
○	×	UHF	14 ∫ 69		Ⅳ

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

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